Selected Grants

SELECTED GRANTS

DIVISION OF SYNTHETIC CHEMISTRY
— Organoelement Chemistry —

Tokitoh, N.
Construction of Polycyclic Aromatic Compounds Containing Heavier Group 14 Elements and Development of Their Functions by Utilizing the Features of Main Group Elements
Grants-in-Aid for Scientific Research (B)
1 April 2010–31 March 2013

Sasamori, T.
Construction of Novel d-π Conjugated Systems Containing Heavier Main Group Elements and Their Functions
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

Mizuhata, Y.
Construction of Novel Silicon–Silicon Double-Bond Compounds Bearing Alkynyl Substituents
Grants-in-Aid for Young Scientists (B)
1 April 2009–31 March 2012

Mizuhata, Y.
Syntheses of Polycyclic Aromatic Compounds Containing Heavier Group 14 Elements and Their Functions
Kinki Invention Center
1 April 2010–31 March 2011

Mizuhata, Y.
Synthesis of Phthalocyanine Derivatives Bearing Phosphorus Atoms as Skeletal Elements and Their Properties
Grants-in-Aid for Scientific Research on Innovative Area "π-Space"
1 April 2011–31 March 2013

Agou, T.
Development of Electron-accepting Conjugated Molecules Densely Substituted with Boron Atoms
Grants-in-Aid for Young Scientists (B)
1 April 2009–31 March 2011

Kawashima, T.; Kobayashi, J.; Agou, T.
Development of Dimensionally-Extended Hetero-π-conjugated Molecules
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

— Structural Organic Chemistry —

Murata, Y.
Synthesis and Properties of Bowl-shaped π-Systems by Top-down Approach
Grants-in-Aid for Young Scientists (A)
1 April 2008–31March 2011

Murata, Y.
Creation and Function of Spherical π-Space Encapsulating an Active Small Molecule
Grants-in-Aid for Scientific Research on Innovative Areas "π-Space"
1 December 2008–31 March 2013

Murata, Y.
Synthesis of Tailor-made Nanocarbons and Their Application to Electronic Devices
Grants-in-Aid for Scientific Research (A)
1 April 2011–31 March 2016

Wakamiya, A.
Creation of π-Electron Boron Clusters Using Lewis Basic Ligand
Grants-in-Aid for Challenging Exploratory Research
1 April 2009–31 March 2011

Wakamiya, A.; Murata, Y.
Development of Dye-sesitized Solor Cells Using Organic Dyes Derived from Natural Products
ALCA (Advanced Low Carbon Technology Research and Development Program), Japan Science and Technology Agency
1 October 2011–31 March 2017

Wakamiya, A.
Development of Organic Dyes Based on Fine Tuning of π-Orbitals Using DFT Calculations
PRESTO (Precursory Research for Embryonic Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2016

Murata, M.
Construction of Spherical Conjugated π-Electron Systems and Elucidation of Their Functions
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2012

— Synthetic Organic Chemistry —

Kawabata, T.
Fine Organic Synthesis Based on Catalytic Regioselective Functionalization
Grants-in-Aid for Scientific Research (A)
1 April 2009–31 March 2013

Kawabata, T.
Regioselective Molecular Transformation Based on Organocatalytic Molecular Recognition
Grants-in-Aid for Scientific Research on Innovative Area
1 October 2011–31 March 2015

Furuta, T.
Development of Regio- and Stereoselective Transformations of Polyfunctionalized Molecules with Axially Chiral Catalysts
Grants-in-Aid for Scientific Research (C)
28 April 2011–31 March 2014

Yoshimura, T.
Syntheses of Novel Amino Acids and Natural Products Derived from Amino Acids via Memory of Chirality
Grants-in-Aid for Young Scientists (B)
28 April 2011–31 March 2013

—Advanced Inorganic Synthesis —

Teranishi, T.
Development of Photoacoustic Gold Nanoparticle Probes for Cancer Detection
Industry-Academia Collaborative R&D Program
1 December 2011–31 March 2017

Teranishi, T.
Creation of Enhanced Photoelectric Fields Based on Nanoparticle Superlattices for Novel Chemical Reactions
Grants-in-Aid for Scientific Research on Priority Area "Strong Photon-Molecule Coupling Fields"
1 August 2007–31 March 2011

Teranishi, T.
Development of Structure-Specific Energy-Related Functional Materials Using Heterostructured Nanoparticles
Grants-in-Aid for Scientific Research (A)
1 April 2011–31 March 2014

Teranishi, T.
Elucidation of Crystal Structure-Dependent Hydrogen Storage Properties of Large Palladium Nanoparticles
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2012

Teranishi, T.
Synthesis of Macrocyclic π-Conjugated Ligand-Protected Gold Clusters and Fabrication of Nano-Gap Single Electron Devices
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2008–31 March 2014

DIVISION OF MATERIALS CHEMISTRY
— Chemistry of Polymer Materials —

Tsujii, Y.
Fabrication and Precise Characterization of Novel Tribomaterials
Grants-in-Aid for Scientific Research (A)
1 April 2009–31 March 2012

Tsujii, Y.
Development of Novel Nanosystem by Hierarchically Assembling Concentrated Polymer Brushes
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2009–31 March 2015

Tsujii, Y.
Research and Development of Safe Solid-Electrolyte by Hybridization of Ionic Liquids and Polymers
Research and Development for Promotion of Regional Innovation Program, Japan Science and Technology Agency
9 August 2010–31 March 2012

Ohno, K.
Development of Next-Generation MRI Contrast Agent
Industrial Technology Research Grant Program, NEDO
1 July 2009–30 June 2013

— Polymer Controlled Synthesis —

Yamago, S.
Creation of Hoop-shaped π-conjugated Molecules through the Supramolecular Chemical Approach and Elucidation of Their Properties
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2010–31 March 2016

— Inorganic Photonics Materials —

Yoko, T.
Organic-inorganic Material for Biosensor Application
Grants-in-Aid for Science Research, Challenging Exploratory Research
1 April 2011–31 March 2014

Tokuda, Y.
Self-organization Synthesis of Nano-tube for Biosensor Application
Sumitomo Foundation, Grant for Basic Science Research Projects
1 November 2011–31 March 2013

Masai, H.
Study on Emission Mechanism of Sn-doped Low-melting Glass and the Application
Asahi Glass Foundation, Research Grant Program
1 April 2011–31 March 2012

Masai, H.
Application of Tin-doped Low-melting Glass to Novel Emission Material
Inamori Foundation, Research Grant
1 April 2011–31 March 2013

—Nanospintronics —

Ono, T.
Development of Novel Spin Dynamics Devices
Grants-in-Aid for Scientific Research(S)
1 April 2011–31 March 2016

Kobayashi, K.
Nonequilibrium Many-body Dynamics in Solid State Devices
Funding program for Next Generation World-Leading Researchers (NEXT program)
10 February 2011–31 March 2014

Chiba, D.
Realization of Electric-field-induced Magnetization Switching and its Application for Information Writing Method in Nano-scaled Magnetic Non-volatile Memories
PRESTO Program "Nanosystem and Function Emergence", Japan Science and Technology Agency
1 October 2010–31 March 2014

DIVISION OF BIOCHEMISTRY
— Biofunctional Design-Chemistry —

Futaki, S.
Novel Methods for Delivering Nucleic Acids Therapeutics
Japan Science and Technology Agency, Strategic Japanese-Swedish Cooperative Programme on "Multidisciplinary BIO"
1 July 2009–30 June 2012

— Chemistry of Molecular Biocatalysts —

Hiratake, J.
Applications of Cellular Collagen Biosynthesis Induced by Novel γ-Glutamyl Transpeptidase (GGT) Inhibitors
Adaptable and Seamless Technology Transfer Program through Target-Driven R&D (A-STEP), Japan Society and Technology Agency
1 December 2009–31 March 2012

Watanabe, B.
Development of Novel Chemicals to Regulate Glutathione Biosynthesis
Grants-in-Aid for Young Scientists (Start-up)
1 April 2009–31 March 2011

Koeduka, T.
Isolation and Characterization of Prenyltransferases in Furanocoumarin Biosynthesis
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2011

— Molecular Biology —

Aoyama, T.
Mechanism of Cytokinin Signal Transduction by the Response Regulator ARR1
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

Aoyama, T.
Growth Strategy of Plants through Morphological Changes of Roots
Grants-in-Aid for Scientific Research on Innovative Area
1 April 2011–31 March 2013

Tsuge, T.
Regulatory Mechanism of Plant Morphogenesis by the Regulator of mRNA Metabolism SAP130
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

Tsuge, T.
Regulatory Mechanism of Environmental Stimuli Response that Integrates mRNA Metabolism and Protein Degradation in the Cell
Grants-in-Aid for Scientific Research on Innovative Area
1 April 2011–31 March 2013

— Chemical Biology —

Uesugi, M.
Control and Analysis of Cells by Synthetic Small Molecules
Funding Program of Next Generation World-Leading Reseachers (NEXT Program)
10 February 2011–31 March 2014

DIVISION OF ENVIRONMENTAL CHEMISTRY
—Molecular Materials Chemistry—

Kaji, H.
Fabrication of High-Performance Polymer EL Devices Having Covalently-Bonded Interfaces
Grants-in-Aid for Scientific Research (A)
1 April 2009–31 March 2012

Kaji, H.
Development of Solid-State NMR Methodology for the Structure Analysis of Donor-Acceptor Supramolecules
Grants-in-Aid for Challenging Exploratory Research
1 April 2009–31 March 2010

Goto, A.
Development of Green Living Radical Polymerization with Low Cost and Elucidation of Their Properties
Industrial Technology Research Grant Program, NEDO
10 September 2007–31 August 2011

Goto, A.
Dual Control Living Polymerizations with Organic Catalysts
Grants-in-Aid for Young Scientists (A)
1 April 2011–31 March 2014

Goto, A.
High Performance Color Material by Living Radical Polymerization with Organic Catalysts
Japan Science and Technology Agency, A-STEP
1 November 2011–31 March 2015

—Hydrospheric Environment Analytical Chemistry—

Sohrin, Y.
Development of Precise Isotopic Analysis for Founding Heavy Stable Isotopic-Marine Chemistry
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

Sohrin, Y.
Development of Marine Geochemistry of Palladium, Platinum and Gold
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2012

Sohrin, Y.
Development of a New Automated System for Preconcentration of Heavy Metals to Assess the Influence of Biology and Its Application to Oceanographic Study
Steel Foundation for Environmental Protection Technology
1 November 2011–31 October 2013

Murayama, M. (Investigator: Sohrin, Y.)
Reconstruction of Redox Conditions in Meedee Lake, Mediterranean, Sediment Core Using Molybdenum/Tungsten Ratio
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

—Solution and Interface Chemistry—

Hasegawa, T.
Operando Analysis of Concentration and Diffusion of Negatively-Adsorptive Chemical Species in a Monolayer Formed at an Air/Water Interface
Grants-in-Aid for Scientific Research on Innovative Areas "Molecular Sciences of Soft Interface"
1 April 2011–31 March 2013

Matubayasi, N.
Free-Energy Analysis of ATP Hydrolysis
Grants-in-Aid for Scientific Research on Innovative Areas "Hydration and ATP Energy"
1 December 2008–31 March 2013

—Molecular Microbial Science—

Kurihara, T.
Exploration of Cold-Adapted Microorganisms for Development of New Low-Temperature Biotechnological Processes
Grants-in-Aid for Scientific Research (B)
1 April 2010–31 March 2013

Kurihara, T.
Investigation of Chaperone Function of Phospholipids Containing Polyunsaturated Fatty Acids and Their Application to Overproduction of Membrane Proteins
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2012

Kurihara, T.
Biosynthesis and Function of Phospholipids Containing Polyunsaturated Fatty Acids in Bacteria
Grant from Japan Foundation for Applied Enzymology
1 April 2011–31 March 2012

Kawamoto, J.
Development of a System for the Bioremediation of Rare Metal Pollution and Rare Metal Recovery Using Novel Metal-Metabolizing Bacteria
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

Kawamoto, J.
Synthesis of Functional Metal Nanoparticles by Using Metal-Metabolizing Bacteria
Grants-in-Aid for Challenging Exploratory Research
1 April 2011–31 March 2013

DIVISION OF MULTIDISCIPLINARY CHEMISTRY
—Polymer Materials Science—

Kanaya, T.
Polymer Crystallization and Control of Higher Order Structure Control through Non-equilibrium Intermediate States
Grants-in-Aid for Scientific Research (A)
1 April 2008–31 March 2012

Nishida, K.
Property Control of Water-soluble Cellulose Derivatives
Grants-in-Aid for Scientific Research (C)
1 April 2011–31 March 2014

Inoue, R.
Surface and Interfacial Physical Properties of Polymer Thin Films Studied by Neutron Scattering
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2012

—Molecular Rheology—

Watanabe, H.
Creation of Non-equilibrium Soft Matter Physics: Structure and Dynamics of Mesoscopic Systems
Grants-in-Aid for Scientific Research on Priority Areas "Creation of Non-Equilibrium Soft Matter Physics"
1 April 2006–31 March 2011

Watanabe, H.
Effect of Thermodynamical and Geometrical Constraints on the Dynamics of Block-copolymers
Grants-in-Aid for Scientific Research (B)
1 April 2009–31 March 2012

Masubuchi, Y.
Multi-scale Simulations for Soft Matters
CREST (Core Research for Evolutional Science and Technology), Japan Science and Technology Agency
1 October 2006–31 March 2012

Masubuchi, Y.
A Novel Molecular Model for Branched Polymer Dynamics
Grants-in-Aid for Scientific Research (B)
1 April 2008–31 March 2011

Masubuchi, Y.
Relaxation of Polymers under Fast Flows
Grants-in-Aid for Scientific Research (B)
1 April 2011–31 March 2014

Matsumiya, Y.
Analysis of Mechanical Properties for Multi-component Liquid by Dielectric Methods
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2013

Uneyama, T.
Theory of Mechanical and Dielectric Response of Polymers under Shear Flow
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2013

—Molecular Aggregation Analysis—

Yoshida, H.
Inverse-Photoemission Spectroscopy with Zero Kinetic Energy Electrons for Measuring the Unoccupied Electronic States of Organic Semiconductors
PRESTO Program, Japan Science and Technology Agency
1 October 2009–30 September 2012

ADVANCED RESEARCH CENTER FOR BEAM SCIENCE
—Laser Matter Interaction Science—

Sakabe, S.
Demonstration of Ultra-fast Electron Diffraction Using Fast Electrons Accelerated in Plasmas by an Intense Femtosecond Laser
Grants-in-Aid for Scientific Research (S)
1 April 2011–31 March 2016

Sakabe, S.
High Energy Electron Gun of a Fine Wire Driven by an Intense Femtosecond Laser
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2012

Sakabe, S.
Demonstration of Ultra-fast Electron Diffraction Using Fast Plasma Electrons Produced by an Intense Femtosecond Laser
Yamada Science Foundation
1 April 2010–31 March 2012

Hashida, M.
Amorphous Metal Thin Film with the Surface of Periodic Nanostructures Self-formed by Femtosecond Laser Pulses
Grants-in-Aid for Scientific Research (C)
1 April 2010–31 March 2013

Tokita, S.
Development of Short-pulse Intense Laser Technology in Mid-infrared Fluoride Fiber Lasers
Grants-in-Aid for Young Scientists (B)
1 April 2010–31 March 2012

INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE
—Organic Main Group Chemistry—

Nakamura, M.
Development of Selective Organic Synthesis Based on Iron Catalysis
Funding Program for Next Generation World-Leading Researchers (NEXT Program)
1 March 2011–31 March 2014

Hatakeyama, T.
Synthesis of Helical π-Conjugated Molecules toward Next Generation Semiconductors
PRESTO Program, Japan Science and Technology Agency
1 October 2011–31 March 2014

—Advanced Solid State Chemistry—

Shimakawa, Y.
Strategic State-of-the-art Solid State Chemistry for New Functional Materials: Exploring for New Multi-functional Materials
Grants-in-Aid for Creative Scientific Research
1 April 2007–31 March 2012

Shimakawa, Y.
Exploring for New Functional Materials with Unusual Ionic States and Coordinations
Creation of Innovative Functions of Intelligent Materials on the Basis of the Element Strategy
1 April 2011–31 March 2016

—Organotransition Metal Chemistry—

Ozawa, F.
Study of C–H Direct Arylation Reactions for Precisely Controlled Synthesis of π-Conjugated Polymers
Grants-in-Aid for Science Research (B)
1 April 2011–31 March 2015

Nakajima, Y.
Efficient Photoreduction of Carbon Dioxide Catalyzed by an Iron Complex Bearing a Phosphaalkene Ligand
PRESTO Program, Japan Science and Technology Agency
1 October 2009–31 March 2013

—Photonic Elements Science—

Kanemitsu, Y.
Microscopic Spectroscopy of Highly Excited State in Semiconductor Nanostructures and Exploring Novel Optical Functionality
Grants-in-Aid for Scientific Research on Innovative Areas ”Optical Science of Dynamically Correlated Electrons”
13 November 2008–31 March 2013

Tayagaki, T.
Controlling of the Many-body Interaction between Photoexcited Carriers toward Hot Carrier Solar Cells
PRESTO Program, Japan Science and Technology Agency
1 October 2009–31 March 2013

BIOINFORMATICS CENTER
—Chemical Life Science—

Kanehisa, M.
Deciphering Systemic Biological Functions by Integration of Genomic and Environmental Information
Bioinformatics Research and Development, Japan Science and Technology Agency
1 April 2006–31 March 2011

Kanehisa, M.
Genome-based Integrated Resource of Diseases, Drugs, and Environmental Substances
Life Science Database Integration Project, Japan Science and Technology Agency
1 April 2011–31 March 2014

Goto, S.
Hierarchical Structuring and Integration of Knowledge in Life Sciences
Integrated Database Project
1 April 2007–31 March 2011

Goto, S.
Key Technology Development for Data Integration and Application to Emerging Fields
Life Science Database Integration Project, Japan Science and Technology Agency
1 April 2011–31 March 2014

Goto, S.
System Biology Approach to Understanding Atherosclerosis
Japan – Sweden Research Cooperative Program, JSPS
1 April 2010–31 March 2012

—Mathematical Bioinformatics—

Akutsu, T.; Kawabata, T.; Nagamochi, H.; Hayashida, M.
An Approach to Novel Structural Design by Combining Discrete Methods and Kernel Methods
Grants-in-Aid for Scientific Research (A)
1 April 2010–31 March 2015

Akutsu, T.
Discrete Model-Based Methods for Control of Complex Biological Systems
Grants-in-Aid for Challenging Exploratory Research
1 April 2010–31 March 2013